

Remarks

In the office action mailed August 15, 2003, the Examiner objected to the Declaration and Power of Attorney, rejected claims 1 and 11 under 35 U.S.C. § 112, second paragraph, rejected claims 1, 2, 11, and 12 under 35 U.S.C. § 102 as being anticipated by an article, Mengel, P., "Automated Inspection of Solder Joints on PC Boards By Supplementary Processing of 3D and Gray-Level Images," IECON '90: Industrial Electronics Society 16th Annual Conference, pp. 786-791 (hereinafter Mengel), claims 6 and 16 under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,956,134 to Roy et al. (hereinafter Roy), claims 3, 4, 13 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Mengel in view of U.S. Patent No. 4,159,648 to Prosky, claims 5, 8, 9, 15, 18, 19 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Mengel in view of U.S. Patent No. 6,526,165 to Montillo et al., claims 7 and 17 under 35 U.S.C. § 103(a) as being unpatentable over Mengel in view of U.S. Patent No. 6,047,084 to Kent et al., and claims 10 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Mengel in view of U.S. Patent No. 6,522,777 to Paulsen et al.

By this paper Applicant's attorney amends the specification for consistency with Fig. 4a, amends claims 1, 7, 8, 11, 17, 18 and 21, and adds new claims 22-28. Support for the amendment to claims 1, 11 and 21 can be found, for example, on Figs. 2 and 3, and in the specification on page 4, l. 19 through pg. 5, l. 24, page 8, ll. 9-23, and page 13, ll. 6-19. Support for the amendment to claims 7 and 17 can be found, for example, on Fig. 2 and in the specification on page 11, l. 1 through page 13, l. 2. Support for the amendment to claims 8 and 18 can be found, for example, on Fig. 2 and in the specification on page 8, l. 9 through page 9, l. 23. Support for new claims 22 and 28 can be found, for example, in the specification on page 10, ll. 5-7 and on page 11, l. 22 through page 12, l. 6. Support for new claim 23 can be found, for example, on Fig. 3 and in the specification on page 11, ll. 14-23. Support for new claim 24 can be found, for example, on Fig. 3 and in the specification on page 12, ll. 12-22. Support for new claim 25 can be found, for example, on Fig. 3 and in the specification on page 12, ll. 23-25. Support for new claims 26 and 27 can be found, for example, in the specification on page 17, ll. 8-13. As such, no new matter has been added.

With respect to the Examiner's objection and rejections, the Examiner is invited to consider the following remarks.

A Declaration and Power of Attorney newly signed by Donald J. Svetkoff with additional address information is submitted herewith.

Claims 1 and 11 have been amended to obviate the rejection under 35 U.S.C. § 112, second paragraph.

Amended claim 1 provides a method of processing 3-D and 2-D data in combination to find locations of electronic components mounted on a printed circuit board as a function of the 3-D and 2-D data and based on at least one of identified leads, endcaps, and component features as differentiated from at least one of the mounting substance and the circuit board. Amended claim 11 provides a system having similar limitations. Amended claim 21 provides a method that includes processing 2-D and 3-D data in combination to find locations of endcaps as a function of the 2-D and 3-D data, and further processing using the 2-D data to isolate the endcaps from their bodies..

Mengel fails to provide all of the features of the presently claimed invention. In particular, Mengel provides for use of 3-D data in some instances and 2-D data in other instances, not processing the 3-D and 2-D data in combination to find locations of electronic components mounted on a printed circuit board as a function of the 3-D and 2-D data and based on at least one of identified leads, endcaps, and component features as differentiated from at least one of the mounting substance and the circuit board. Mengel fails to disclose, teach or suggest the use of 2-D data for combination with the 3-D data. As such, a *prima facie* case of anticipation has not been established.

Regarding claims which depend, from the independent claims, Applicants contend that these claims are patentable for at least the same reasons that the independent

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claims are patentable. Moreover, Applicants contend these claims recite further limitations, in addition to the limitations in the independent claims, which render the dependent claims additionally patentable. In particular, regarding claims 6 and 16, Roy is directed to an inspection system and method for leads of semiconductor devices. (Roy, Title). As such, Roy fails to provide imaging the components and the mounting substance on the printed circuit board to obtain 3-D and 2-D data associated with the components and material surrounding the components.

Consequently, in view of the above and in the absence of better art, Applicants' Attorney respectfully submits the application is in condition for allowance which allowance is respectfully requested. A check in the amount of \$546 is enclosed to cover the Petition fee of \$420 and the additional claims filing fee of \$126 for seven (7) additional dependent claims. Please charge any additional fees or credit any overpayments as a result of the filing of this paper to our Deposit Account No. 02-3978 -- a duplicate of this paper is enclosed for that purpose.

The Examiner is requested to telephone the undersigned to discuss prompt resolution of any remaining issues necessary to place this case in condition for allowance.

Respectfully submitted,

John J. Weisgerber, et al.

By 
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Date: January 15, 2004

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Attachments: Declaration and Power of Attorney; Check for \$546



DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY

RECEIVED

Atty. Docket No. GSIL0148PUS
First Named Inventor John J. Weisgerber, et al.

JAN 26 2004

Technology Center 2600

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**METHOD AND SYSTEM FOR INSPECTING ELECTRONIC COMPONENTS
MOUNTED ON PRINTED CIRCUIT BOARDS**

the specification of which:

- [] is attached hereto; or
[X] was filed on (MM/DD/YYYY) 12/11/2000 as U.S. Application Number or PCT International Application Number 09/735,097, and was amended on (MM/DD/YYYY) ____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below, and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

<i>Prior Foreign Application Number(s)</i>	<i>Country</i>	<i>Foreign Priority Date (MM/DD/YYYY)</i>	<i>Priority Not Claimed</i>	<i>Certified Copy Attached? (Yes/No)</i>

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below.

<i>Application Number(s)</i>	<i>Filing Date (MM/DD/YYYY)</i>
60/170,462	12/13/1999

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

<i>Application Number(s)</i>	<i>Filing Date (MM/DD/YYYY)</i>	<i>Status: Patented, Pending, Abandoned</i>

Declaration for Patent Application (cont'd.) Atty. Docket No. GSIL 0148 PUS

I hereby appoint the following registered practitioners to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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